

Appl. No.: 10/630,156
Amdt. Dated: 10/09/2008
Off. Act. Dated: 07/09/2008

REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

1. Typographical Error in U.S. Published Application No. 2002/0022382 (Franklin).

At the outset, the Applicant notes an error in paragraph [0099] of U.S. Published Application No. 2002/0022382 by Franklin. The relevant sentence of paragraph [0099] is the first sentence of the paragraph, which reads as follows:

In the preferred embodiment, FIG. 9N, a modified omega configuration compliant electrical contacts, in strip or array form 45, without crown or break at top 46, are oriented vertically on the thin metal conductive plate **and** bipolar separator plate. (emphasis added)

The word “and” that is emphasized above is a typographical error. The word and should read “or”. There is only a single “thin metal conductive plate” disclosed in Franklin, and that is the bipolar separator plate (BSP). To support this contention, the Applicant notes that no conductive plate of this kind is disclosed, mentioned, or pictured anywhere else in the reference, and also specifically notes paragraph [0077]: “the present fuel cell design 50 uses a single thin metal plate BSP”; and paragraph [0078]: “a large array of individual springs [compliant members] are attached to each BSP each of which makes intimate contact with the MEA attached to the adjacent BSP”; as examples of the composition of the fuel cell in Franklin.

With reference to paragraph [0078], if the springs (compliant members) are attached to the BSP and are in intimate contact with an MEA, there is no conceivable way that a laminar electrical contact can also be attached to the compliant members. Moreover, the figures in Franklin clearly show the ends of the compliant members pointing out into space, such as in FIGS. 5, 6, 7, 8, 11, and 12. There is no laminar electrical contact present in any of these figures whatsoever.

Further, the Examiner’s kind attention is directed to paragraph [0069], defining a “compliant electrode contact”, and FIGS. 9A-9P, which show various embodiments of the compliant contacts. These are the electrical contacts disclosed in Franklin, and an array of these individual spring contacts is the outward-facing surface, as shown in

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FIG. 5, for example. See paragraphs [0027] through [0032], describing the various arrangements of contact points.

The instant claims require a *laminar* contact to be outwardly facing, and a laminar contact is, as the Examiner notes, a thin plate. ***Franklin teaches that the electrical contacts are a plurality of spring ends, and not a laminar plate.*** The laminar contact plate does not have “contact points” like the spring ends or pins disclosed in Franklin. See reference numeral 73 in FIG. 7 of the instant application, which clearly shows that the contact is a laminar plate, and not a plurality of individual contacts.

Finally, the lead inventor in the Franklin reference is the lead inventor in the instant application. If it would be helpful, the Applicant can provide a declaration from the inventor regarding this matter.

2. Rejection of Claims 1-9 and 12-21 under 35 U.S.C. § 103(a).

The Examiner has rejected Claims 1-9 and 12-21 under 35 U.S.C. § 103(a) as being obvious over the combination of U.S. Published Application No. 2002/0022382 by Franklin and U.S. Published Application No. 2002/0127459 by Lenz.

(a) The Franklin Reference. In characterizing Franklin, on page 3 of the Office Action, the Examiner indicates that paragraph [0099] teaches “a conductive electrical contact attached to said independently acting compliant members.” This is not the case. As noted above, the “thin metal conductive plate” references in paragraph [0099] is, in fact, the bipolar separator plate (BSP). Franklin discloses no other metal conductive plate other than the BSPs. There is no separate electrical contact in Franklin; the Examiner is incorrect.

(b) The Lenz Reference and Combination with Franklin. The Examiner cites Lenz for providing “laminar interconnects” and notes that these structures “hav[e] a thin plate portion”, and then proposes to insert the laminar interconnects of Lenz into the fuel

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cells in Franklin.

Respectfully, this combination would not make any sense to one of ordinary skill in the art. There is no need to put these interconnects into Franklin. Franklin discloses fuel cell modules that are stacked together with no further elements therebetween. The compliant contacts are pressed into the adjacent MEA when the system is assembled and the system is mechanically stable. The entire purpose of the interconnects is to facilitate electrical connection and mechanical support of the fuel cell system. There would be no need to insert the interconnects of Lenz into Franklin because the Franklin system provides superior electrical connection and is already mechanically stable.

The Examiner's use of Lenz to support the use of the term "laminar" in the claims is inappropriate. The interconnects of Lenz are plates having fingers or contact pads on one or both sides, which would not be considered "laminar" at all.

(c) Separate compliant members and BSP. The Examiner states:

It would have been obvious ...to employ a separate compliant member and bipolar separator plate in the fuel cell of Franklin, because such a modification would require a mere duplication of parts.

The Applicant is uncertain to what the Examiner refers. The independently-acting compliant members and the BSP in Franklin are two separate entities. The compliant members are merely attached to the BSP with outwardly-facing ends. As to the "duplication of parts", what parts are the Examiner asserting to be duplicated??

The Examiner next makes reference to "multiple laminar plates serve as fuel cell interconnects" with no reference to how this relates to the instant invention as claimed. The instant invention uses no fuel cell interconnects, and discloses fuel cell assemblies having a BSP, an MEA, independently-acting compliant contacts, and a separate laminar electrical contact, all of which are combined in a specific orientation, as recited in the claims.

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(d) Apertures.

Finally, the Applicant has consistently noted that the Examiner's characterization of "apertures" is factually incorrect.

The Examiner has, in fact, cut and pasted the same incorrect statements ("the skilled artisan recognizes that fastening attachments such as apertures with screw fittings firmly secure abutting members", among others) in practically every Office Action with no response regarding the definitions of the term "aperture" provided by the Applicant. How can prosecution advance when these arguments are not addressed?

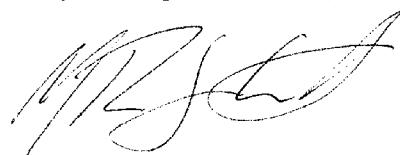
Apertures are not attachments. Apertures are openings. There are apertures (i.e., openings) in the laminar electrical contact that facilitate gas flow. ***The apertures have nothing whatsoever to do with attaching elements to one another.*** It is respectfully requested that the Examiner specifically discuss this issue in the next Office Action, should this case not be allowed.

3. Conclusion.

In the event any further matters remain at issue with respect to the present application, Applicants respectfully request that the Examiner please contact the undersigned below at the telephone number indicated in order to discuss such matter prior to the next action on the merits of this application.

Date: October 9, 2008

Respectfully submitted,



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